In the claims:

Following is a complete set of claims as amended with this Response.

1. (Currently Amended) A method comprising:

~~determining which traffic class each received network packet belongs;~~

determining a path to be taken by each packet through a switch fabric;

classifying each packet into one of a plurality of flow bundles based on the packet's destination and path through the switch fabric <u>and labeling each packet with a flow identifier to identify the associated flow bundle</u>;

mapping each packet into one of a plurality of queues<u>;</u>

<u>queuing each packet into the respective mapped queue</u> to await transmission based on the flow bundle <u>into which</u> ~~to which~~ the packet has been classified;

regulating rates at which traffic moves out of the queues with a traffic shaping algorithm; and

scheduling the packets in the queues for transmission <u>from the queues</u> to a next destination through the switch fabric.

2. (Cancelled)

3. (Original) The method of claim 1, wherein determining a path to be taken by each packet through a switch fabric comprises determining a path to be taken by each packet through a switch fabric based on load balancing.

4. (Original) The method of claim 1, further comprising labeling each packet with information identifying an associated flow and flow bundle.

5. (Original) The method of claim 1, wherein classifying each packet into one of a plurality of flow bundles comprises classifying each packet into one of a plurality of flow bundles based on the packet's destination, path through the switch fabric, and priority.

6. (Original) The method of claim 1, wherein scheduling the packets in the queues for transmission comprises scheduling the packets in the queues for transmission using a Round Robin scheduling algorithm.

7. (Original) The method of claim 1, wherein scheduling the packets in the queues for transmission comprises scheduling the packets in the queues for transmission using a Longest Delay First algorithm.

8. (Original) The method of claim 1, wherein scheduling the packets in the queues for transmission comprises scheduling the packets in the queues for transmission using a Stepwise QoS Scheduler (SQS).

9. (Currently Amended) The method of claim 1, <u>further comprising determining a traffic class to which</u> ~~wherein determining which traffic class~~ each received network packet belongs ~~comprises determining which traffic class each received network packet belongs~~ based on protocols associated with the packet.

10. (Original) The method of claim 1, further comprising forwarding the packets to a switch coupled to the switch fabric for transmission to the next destination.

11. (Currently Amended) An apparatus comprising:

a classification unit to examine packets received from a network, determine a path to be taken by each packet through a switch fabric, ~~and~~ classify each packet into one of a plurality of flow bundles based on the packet's destination and path through the switch fabric<u>, and label each packet with a flow identifier to identify the associated flow bundel</u>;

a mapping unit coupled to the classification unit to place each packet into one of a plurality of queues based on the flow bundle <u>into which</u> ~~to which~~ the packet has been classified;

one or more traffic shapers coupled to the mapping unit to regulate the rate at which traffic moves out of the queues; and

a scheduler coupled to the traffic shapers to regulate the order in which packets in the queues will be transmitted <u>from the queues</u> to a next destination through the switch fabric.

12. (Original) The apparatus of claim 11, further comprising an access unit coupled to the classification unit to receive packets from and transmit packets to the network.

13. (Original) The apparatus of claim 11, further comprising a switch coupled to the scheduler to transmit the scheduled packets to the switch fabric.

14. (Original) The apparatus of claim 11, wherein the classification unit comprises a load balancing element to determine a path to be taken by each packet through a switch fabric based on load balancing.

15. (Original) The apparatus of claim 11, wherein the classification unit comprises a labeling element to label each packet with information identifying an associated flow and flow bundle.

16. (Currently Amended) An article of manufacture comprising:

a <u>computer-readable</u> <s>machine-accessible</s> medium including content that when read <s>accessed</s> by a <u>computer</u> <s>machine</s> causes the <u>computer</u> <s>machine</s> to:

determine a path to be taken by each received network packet through a switch fabric;

classify each packet into one of a plurality of flow bundles based on the packet's destination and path through the switch fabric;

<u>labeling each packet with a flow identifier to identify the associated flow bundle;</u>

map each packet into one of a plurality of queues<u>;</u>

<u>queue each packet into the respective mapped queue</u> to await transmission based on the flow bundle <u>into which</u> <s>to which</s> the packet has been classified;

regulate a rate at which traffic moves out of the queues using a traffic shaping algorithm; and

schedule the packets in the queues for transmission <u>from the queues</u> to a next destination through the switch fabric.

17. (Cancelled)

18. (Currently Amended) The article of manufacture of claim 16, wherein the <u>computer-readable</u> ~~machine-accessible~~ medium further includes content that causes the <u>computer</u> ~~machine~~ to label each packet with information identifying an associated flow and flow bundle.

19. (Currently Amended) The article of manufacture of claim 16, wherein the <u>computer-readable</u> ~~machine-accessible~~ medium further includes content that causes the <u>computer</u> ~~machine~~ to determine <u>a</u> ~~which~~ traffic class <u>to which</u> each received network packet belongs.

20. (Currently Amended) The article of manufacture of claim 16, wherein the <u>computer-readable</u> ~~machine-accessible~~ medium including content that when accessed by the <u>computer</u> ~~machine~~ causes the <u>computer</u> ~~machine~~ to determine a path to be taken by each received network packet through a switch fabric comprises <u>computer-readable</u> ~~machine-accessible~~ medium including content that when accessed by the <u>computer</u> ~~machine~~ causes the <u>computer</u> ~~machine~~ to determine a path to be taken by each received network packet through a switch fabric based on load balancing.

21. (Currently Amended) The article of manufacture of claim 16, wherein the <u>computer-readable</u> ~~machine-accessible~~ medium including content that when accessed by the <u>computer</u> ~~machine~~ causes the <u>computer</u> ~~machine~~ to classify each packet into one of a plurality of flow bundles comprises <u>computer-readable</u> ~~machine-accessible~~ medium including content that when accessed by the <u>computer</u> ~~machine~~ causes the <u>computer</u> ~~machine~~ to classify each packet into one of a plurality of flow bundles based on the packet's destination, path through the switch fabric, and priority.

22. (Currently Amended) The article of manufacture of claim 16, wherein the computer-readable ~~machine-accessible~~ medium further includes content that causes the computer ~~machine~~ to forward the packets to a switch coupled to the switch fabric for transmission to the next destination.

23. (Currently Amended) A system comprising:

a switch to receive and transmit packets;

a classification unit to examine packets received from a network through the switch, determine a path to be taken by each packet through a switch fabric, and classify each packet into one of a plurality of flow bundles based on the packet's destination and path through the switch fabric;

a mapping unit coupled to the classification unit to place each packet into one of a plurality of queues based on the flow bundle into which ~~to which~~ the packet has been classified;

one or more traffic shapers coupled to the scheduler to regulate rates at which traffic moves out of the queues;

a scheduler coupled to the mapping unit to regulate the order in which packets in the queues will be transmitted from the queues to a next destination; and

a switch fabric coupled to the switch via which scheduled packets are transmitted to the next destination.

24. (Cancelled)

25. (Original) The system of claim 23, wherein the classification unit comprises a load balancing element to determine a path to be taken by each packet through the switch fabric based on load balancing

26. (Original) The system of claim 23, wherein the classification unit comprises a labeling element to label each packet with information identifying an associated flow and flow bundle.